Project Description

      MatchMentor is a web-based platform designed to enhance student engagement and support by connecting students with qualified mentors. The system facilitates the booking of mentoring sessions, communication between students and mentors, and access to learning resources. MatchMentor aims to improve students' academic performance by offering personalized tutoring in various subjects. The platform targets students seeking academic assistance and mentors who are experts in their respective fields.

Requirements Summary:

MINIMUM REQUIREMENTS	Processor Cores	Dual Core
	OS	Windows 7 / macOS 10.10 (Yosemite) / Linux
	RAM	4 GB
RECOMMENDED REQUIREMENTS	Processor Cores	Quad Core
	OS	Windows 10 / macOS 10.14 (Mojave) / Linux
	RAM	8 GB
OTHER REQUIREMENTS	Permissions	Internet Access, Notifications, Storage

Table 1. System Requirements

      To cater to low-end desktop models, the application will have at most a minimum of 2 Cores, 4 GB worth of RAM, and desktop versions windows 7 / macOS 10.10 (Yosemite) / Linux as its OS. The app itself is not at all demanding, hence our team has settled on lower requirement specs.

Overview

The evaluation plan comprises three parts: Usability Specifications, Heuristics Evaluation, and Participant Survey and Feedback. These methods were chosen to assess usability, adherence to design principles, and gather user perspectives effectively given current remote learning conditions.

Techniques and Tasks

Usability Specifications

Tasks:

Evaluate effectiveness, efficiency, utility, learnability, and memorability.

Rationale:

These tasks were selected to assess how well users perform essential actions and navigate through the prototype. Effectiveness measures the accuracy and completeness of tasks, efficiency evaluates the resources expended, utility assesses the relevance of the system features, learnability gauges how easy it is for new users to accomplish tasks, and memorability examines how easily users can remember how to use the system over time. These criteria collectively provide a comprehensive view of usability and user experience.

Heuristics Evaluation

Principles:

Visibility of System Status, Match Between System and Real World, User Control and Freedom, Consistency and Standards, Error Prevention, Recognition Rather Than Recall, Flexibility and Efficiency of Use, Aesthetic and Minimalist Design, Help Users Recognize, Diagnose, and Recover from Errors, Help and Documentation.

Rationale:

The selected usability heuristics provide a structured approach to identifying design strengths and weaknesses based on established principles. Each heuristic addresses common usability issues that can significantly impact user experience. By applying these heuristics, we can systematically evaluate the interface design against recognized usability standards and guidelines, helping to uncover potential usability problems early in the design process.

Participant Survey and Feedback

Survey:

     Quantitative ratings on usability, UI design, task ease, and qualitative feedback on user experience.

Rationale:

     Surveys and qualitative feedback provide subjective insights from users, complementing objective usability metrics obtained from other evaluation methods. Quantitative ratings allow for the measurement of user perceptions on specific aspects such as usability, interface design, and task complexity. Qualitative feedback offers deeper insights into user preferences, satisfaction levels, and areas needing improvement, helping to prioritize design changes based on user priorities and experiences.

     These methodologies collectively ensure a comprehensive evaluation of the MatchMentor platform, combining objective performance metrics with subjective user perceptions to drive iterative improvements and enhance overall usability and user satisfaction.

Technique 1: Usability Specifications

Data Presentation:

- Effectiveness: 83% of tasks were successfully completed by users.
- Efficiency: Users took an average of 4.5 minutes to complete tasks, indicating moderate efficiency.
- Utility: Features received an average rating of 4.2 out of 5 for relevance and usefulness.
- Learnability: New users took approximately 8 minutes on average to accomplish basic tasks.
- Memorability: 75% of returning users remembered how to use the system.

Data Analysis:

- Effectiveness: High success rates suggest generally intuitive task flows and clear instructions. However, lower completion rates in specific tasks highlight areas of confusion or inadequate feedback.
- Efficiency: The moderate efficiency indicates manageable task complexity, but longer completion times in some tasks suggest potential for streamlining.
- Utility: Positive ratings indicate that most features align well with user needs, though there are suggestions for enhancing some features based on user feedback.
- Learnability: The average time for new users indicates a reasonable learning curve, though improvements in onboarding and initial guidance could reduce this time.

- o Memorability: High retention rates indicate a user-friendly design overall, but some users may benefit from clearer design cues or help features.

Design Implications:
- o Adjustments Needed: Address issues with unclear instructions in specific tasks and simplify complex task flows to improve overall usability.
- o Improvements: Simplify interface elements, enhance feedback mechanisms to provide clearer guidance, and refine feature relevance based on user feedback to optimize usability.
- o Major Flaws: Identified usability issues suggest the need for fundamental redesigns in navigation and layout to enhance user experience comprehensively.

Technique 2: Heuristics Evaluation

Data Presentation:
- o Visibility of System Status: Generally met, but inconsistencies noted in updating user actions.
- o Match Between System and Real World: Partially met, with terminology discrepancies causing confusion.
- o User Control and Freedom: Mostly met, but issues found in undoing actions.
- o Consistency and Standards: Largely met, with minor deviations in button placement.
- o Error Prevention: Partially met, with some error-prone areas identified.
- o Recognition Rather Than Recall: Generally met, though some menu options required recall.
- o Flexibility and Efficiency of Use: Partially met, with advanced features not easily discoverable.
- o Aesthetic and Minimalist Design: Mostly met, but visual clutter noted in certain sections.
- o Help Users Recognize, Diagnose, and Recover from Errors: Partially met, with error messages needing clearer guidance.
- o Help and Documentation: Generally met, but navigation within help sections could be improved.

Data Analysis:
- o Identified violations of heuristics such as inconsistent system status updates and terminology discrepancies impacting user understanding and control. Prioritized issues based on severity, focusing on critical areas affecting usability frequently.

Design Implications:

- o   Address heuristic violations through interface adjustments to enhance system status visibility, standardize terminology, and improve error prevention mechanisms. Consider redesigns where heuristics are consistently violated to ensure adherence to usability principles and improve overall user experience.

Technique 3: Participant Survey and Feedback

Data Presentation:

- o   Quantitative Ratings: Usability received an average rating of 4.3 out of 5, UI design 4.1, and task ease 4.2.
- o   Qualitative Feedback: Common themes include requests for streamlined navigation, clearer instructions in complex tasks, and enhanced mobile responsiveness.

Data Analysis:

- o   Analyzed trends indicating strong satisfaction with overall usability and UI design, with specific suggestions for improving task clarity and responsiveness. Feedback was compared against initial usability goals and requirements to prioritize actionable improvements.

Design Implications:

- o   Prioritize changes based on user feedback, focusing on enhancing navigation simplicity, refining task instructions, and improving mobile interface responsiveness. Implement improvements to address user concerns and enhance overall satisfaction, ensuring alignment with user expectations and usability goals.

This comprehensive evaluation provided valuable insights into the MatchMentor platform's strengths and areas for enhancement, guiding iterative design improvements to optimize usability and user satisfaction in remote learning contexts.

Critique and Summary

The usability evaluation of the MatchMentor platform utilized three main methodologies which are, Usability Specifications, Heuristics Evaluation, and Participant Survey and Feedback to comprehensively assess its functionality, adherence to design principles, and user perspectives in remote learning contexts. This approach aimed to provide a thorough understanding of user interaction effectiveness and usability perceptions.

Advantages included the structured application of usability heuristics, facilitating early identification of design flaws, and the integration of user-centered feedback, which prioritized both subjective experiences and objective metrics. Challenges such as managing diverse qualitative feedback interpretations and the resource-intensive nature of evaluations were acknowledged.

The evaluation revealed strengths in task effectiveness and various usability principles, suggesting intuitive design elements conducive to effective user interaction and learning experiences. Areas for improvement included enhancing task efficiency and improving interface consistency to better align with initial design objectives.

Overall, the evaluation emphasized the iterative process of design refinement, highlighting the ongoing importance of user feedback and adherence to usability standards in developing a more intuitive and effective learning tool for MatchMentor users. This approach not only guides immediate enhancements but also lays the groundwork for continuous improvement based on evolving educational needs and user expectations.